KRUTIK, Kh.

85-10-5/35

AUTHOR: Krutik, Kh., Chairman of the Primary DOSAAF's Organization at the Spinning - Thread Kombinat im. S.M. Kirov

TITLE: The Obligations Fulfilled (Obyazatel'stva vypolneny)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 10, p. 4 (USSR)

ABSTRACT: The author of this item informs about the activity of the parachute circles of the primary DOSAAF's organization, created four years ago, at the Spinning-Thread Kombinat (Pryadil'no-nitochnyy kombinat) im. S.M. Kirov in Leningrad. Each year these circles train up to one hundred sportsmen. The number of parachutists increase all the time. The aviation sportsmen of the Kombinat became permanent participants in all sports activities conducted by the Leningrad Aviation Sport Club. In order to note the fortieth anniversary of the Soviet State the annual plan of parachutists' training has been overfulfilled thrice. Names of several instructors and Komsomol members are mentioned in this item.

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KRUTIK, Kh.

We are getting ready for the starts. Voen.znan. 39 no.10:18 O '63. (MIRA 16:11)

1. Predsedatel' komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu Pryadil'no-nitochnogo kombinata imeni S.M.Kirova, Leningrad.

SHLEYFER, M.L.; ABRAMZON, E.L.; GLIKIN, A.S.; GOLOUL'NIKOV, Ye.M.; KAMKHIN, Ya.B.; KRUTIK, Ya.B.; KHASKIN, I.N.; KOCHENOV, M.I., kand. tekhn. nauk; PODLAZOV, S.S., inzh. red.; SOLOVOV, V.N., inzh. red.; VEDMIDSKIY, A.M., kand. tekhn. nauk, dots.

[Control and measurement automatic machines and instruments for automatic lines]. Kontrol'no-izmeritel'nye avtomaty i pribory dlia avtomaticheskikh linii. Moskva, Mashinostroenie, 1965. 371 p. (MIRA 18:8)

KRUTIK, Ye.B., meditsinskaya sestra

Work of a nurse at a pediatric center. Zdrav. Turk. 7 no.11: 45-47 N'63 (MIRA 17:3)

1. Iz detskogo otdeleniya Poliklinik No.4 goroda Ashkhabada (zav. - V.K.Vasilyukhina).

KRUTIKHOVSKAYA, Z.A.; PODUBNYY, S.A.; PAMEREVSKAYA, A.I., redaktor.

[Manual of instructions on gravimetric prospecting with variometers] Instruktsiia po gravirazvedke s variometrami. Utverzhdena M.T.Shatalovym 24 iiulia 1952 g. Moskva, Gos. izd-vo geol. lit-ry, 1952. 84 p. (MLRA 7:4)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii. (Prospecting--Geophysical methods)

KRUTIKHOVSKAYA, Z. A.

15-57-1-245

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 33

AUTHOR: Krutikhovskaya, Z. A.

TITLE: Some New Data on the Structures of the Basement Rocks in the Srednedneprovskiy (Middle Dnepr) Slope of the Ukrainian Crystalline Shield (Nekotoryye novyye dannyye o strukturakh fundamenta Srednedneprovskogo sklona Ukrainskogo kristallicheskogo shchita)

PERIODICAL: Sov. geologiya, Nr 48, 1955, pp 195-204

ABSTRACT: Magnetic surveys conducted in 1928 to 1930 on the Middle Dnepr slope of the Ukrainian shield between the Orel' and Sula Rivers established the presence of iron-bearing strata of the Krivoy Rog type, while seismic and gravimetric works conducted in 1935 to 1940 clarified in a general manner the structure contours of the foundation. The structure contour map of the foundation produced from the newest data (see Figure), shows an

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Some New Data on the Structures of the Basement Rocks (Cont.)

irregular depth below the surface in the northeastern part and a slope which varies from 0°-40' to 4°-30' (Petrikovka) and from 10° to 11° in the zone of the steep slope. A north-south depression in the surface of the foundation, stretching for 60 km in length and 12 km in width, lies in the region of Gradizhsk-Obolon' at some distance from the glacial formations near mount Privikha; in the northern part of this depression lies the Obolon' depression which is circumscribed by the structure contour of 900 m and which broadens to the north. Farther to the south, but still within the shield, lies the Boltyshkaya depression (29 by 26 km) with its sides sloping 3° to 4° and its depth reaching 600 m. Between the Obolon' and Boltyshka depressions Middle Carboniferous deposits are preserved on the right shore of the Dnepr. It can be assumed that both of these depressions, the one lying at the outcrops of the Middle Carboniferous and the other at the glacial structures near the town of Pivikh, are related to a system of the north-south faults in the foundation. Farther to the east lie the Kremenchug and Omel'nitsa-Laman north-south magnetic anomalies, which coincide with the

Some New Data on the Structures of the Basement Rocks (Cont.)

gravitational anomalies and correspond to the iron-bearing formations composed of layers of iron-rich quartzites and schists; these anomalies are expressed in the relief of the foundation surface by low (up to 80 m) ridges. Farther to the northeast, along the rivers of Psel and Vorskla and between these rivers, lie the Khorol, Toloko-Podyanskaya and Kobelyaki magnetic anomalies. The interrelation of the anomalies indicates that this gravitational field is associated with a vast massif of basic rocks, in various parts of which lie the iron-rich quartzites of different thicknesses, which produce the magnetic anomalies. It can be stated, on the basis of the analogy between the Khorol, Kobelyaki, and Toloko-Podyanskaya anomalies and the Verkhovtsevo anomaly, which also lies within the area of the shield, that the three former anomalies are caused by a complex of iron-bearing effusives, and that they represent the most northerly structures of the second iron belt.

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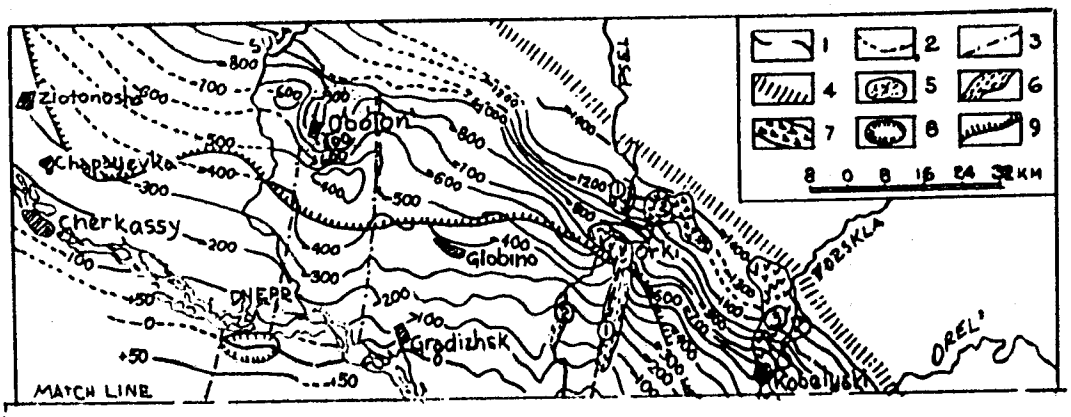
15-57-1-245

Some New Data on the Structures of the Basement Rocks (Cont.)



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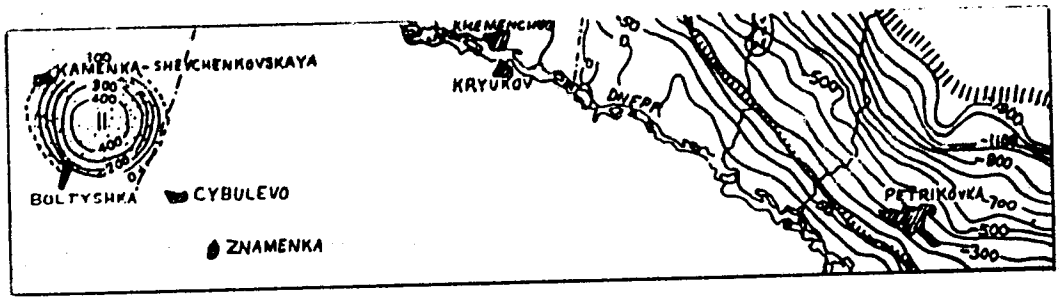
15-57-1-245

Some New Data on the Structures of the Basement Rocks (Cont.)



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Yu. A. K.

KRUTIKHOVSKAYA, Z.A.

Geophysical surveying methods used for the purpose of prospecting for Krivoy Rog type rich ores. Trudy Inst. geol. nauk AN URSR. Ser. geofiz. no.1:75-87 '56. (MLRA 10:8)
(Prospecting--Geophysical methods) (Iron ores)

KHUTIKHOVS'KA, Z.A.

Residual magnetism in rocks and its use in geological prospecting. Dop.AN URSR no.6:557-559 '56. (MLRA 10:2)

1. Institut geologichnikh nauk AN URSR. Predstaviv akademik AN URSR V.G.Bondarchuk.
(Prospecting--Geophysical methods)

KRUTIKHOVSKAYA, Z.A.

Using gravimetric prospecting data to calculate the lower boundary of ferruginous quartzites. Razved. i okh.nedr. 22 no.11:41-47 N '56. (MLRA 10:1)

1. Kiyevskiy geologo-razvedochnyy tekhnikum.
(Quartzite) (Prospecting--Geophysical methods)

SOBAKAR' Grigoriy Timofeyevich [Sobakar, H.T.]; KRUTIKHOVSKAYA, Z.O. [Krutikhovs'ka, Z.O.], kand.geol.-min.nauk, ovt.red.; SHKURKO, V.L., red.izd-va; MATVIYCHUK, O.O. [Matviichuk, O.O.], tekhn.red.

[Structure of the borderland between the Donets Basin and Azov massif based on geophysical data] Struktura zony zchlenuvannia Donbasu z Priazovs'kym masyvom za danymy geofizyky. Kyiv, Vyd-vo Akad. nauk Ukrains'koi RSR, 1958. 41 p. (Akademiia nauk URSR, Kiev Instytut geologichnykh nauk [Trudy]. Seriia geotektoniky i geofizyky no.7) (MIRA 12:9)
(Donets Basin--Geology) (Azov Upland--Geology)

KRUTIKHOVSKAYA, Z. A.

SOV-21-58-8-16/27

AUTHORS: Bondarchuk, V.G., Member of the AS UkrSSR, Kondrachuk, V.Yu., Krutikhovskaya, Z.A., Lebedev, T.S., Mikhaylova, N.P., and Sollogub, V.B.

TITLE: Hypsometric Chart of the Surface of the Precambrian Foundation of the UkrSSR and Some Adjacent Areas (Skhema gipsometrii poverkhnosti dokembriyskogo fundamenta USSR i nekotorykh sopredel'nykh territoriy)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 8, pp 863-866 (USSR)

ABSTRACT: The old charts of the Precambrian foundation within the Ukraine compiled by A.D. Arkhangel'skiy (Ref. 1) and other investigators, of which the most detailed is the chart by E.E. Fotiadi (Ref. 15) are mostly obsolete and do not correspond to the present level of the geologico-geophysical knowledge of the Ukraine territory. Making use of charts compiled by F.A. Rudenko, G.M. Kozlovskaya, V.T. Syabryay, K.M. Varava, R.I. Andreyeva for individual regions and based on the results of electrosurveys by V.I. Klushin, gravimetric investigations by S.I. Subotin and prospecting drilling, in 1957 the authors compiled a hypsometric chart of the surface of the Precambrian crystalline

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Hypsometric Chart of the Surface of the Precambrian Foundation of the UkrSSR and Some Adjacent Areas

foundation of the Ukrainian SSR and certain adjacent areas on a scale of 1 : 750,000. The contemporary surface of the Precambrian foundation has a peculiarly disjointed relief which in its fundamental features accords with the features of the tectonic structure of the areas considered.
There is 1 geological chart and 16 Soviet references.

ASSOCIATION: Institut geologicheskikh nauk AN UkrSSR (Institute of Geological Sciences of the AS UkrSSR)

SUBMITTED: March 18, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration,

1. Geology--USSR 2. Geophysics--USSR

KRUTIKHOVSKAYA, Z.A.

Geological structure of iron ore provinces on the left shore of the central Dnieper, based on geophysical data [with summary in English]. Sov.geol. 1 no.7:85-98 Jl '58. (MIRA 11:11)

1. Institut geologicheskikh nauk AN Ukrainskoy SSR.
(Dnieper Valley--Iron ores)

KRUTIKHOVSKAYA, Z.A. [Krutikhovs'ka, Z.O.]

Structure of the pre-Cambrian foundation of the region along the left bank of the central part of the Dnieper River; based on data from geophysical investigations. Geol.zhur. 18 no.6: 70-83 '58. (MIRA 12:1)
(Dnieper Lowland--Geology, Structural)

BONDARCHUK, V.G.; SOLLOGUB, V.B.; KONDRACHUK, V.Yu.; KRUTIKHOVSKAYA, Z.A.; LEBEDEV, T.S.; MIKHAYLOVA, N.P.

Surface relief of the pre-Cambrian crystalline foundation in the Ukrainian and Moldavian S.S.R. Sov.geol. 2 no.1:41-55 Ja '59. (MIRA 12:4)

1. Institut geologicheskikh nauk AN USSR.
(Ukraine--Geology, Structural) (Moldavia--Geology, Structural)

KRUTIKOVSKAYA, Z.A.

Orientation of ferruginous quartzite cores based on readings of the M-2 magnetometer. Razved.i okh.nedr 25 no.11:37-41 N '59. (MIRA 13:5)

1. Institut geologicheskikh nauk AN USSR.
(Quartzites--Magnetic properties)
(Prospecting--Geophysical methods)

KHUTIKHOVSKAYA, Z.A.; KUZHELOV, O.K.; SUBBOTIN, S.I., doktor geologo-mineral.nauk, nauchnyy red.; FILATOV, V.G., red.izd-va; GUROVA, O.A., tekhn.red.

[Using geophysical methods for studying iron ore formations in the Ukrainian crystalline shield] Primenenie geofizicheskikh metodov dlia izucheniia zhelezorudnoi formatsii ukrainskogo kristallicheskogo shchita. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1960. 128 p. (MIRA 13:7)

1. Chlen-korrespondent AN USSR (for Subbotin).
(Dnieper Valley--Iron ores)
(Prospecting--Geophysical methods)

KRUTYKHOVSKAYA, Z. O.

S/021/60/000/003/008/010
A232/A029

AUTHORS: Lebedyev, T.S.; Krutykhovs'ka, Z.O.

TITLE: On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

PERIODICAL: Dopovidi Akademiyi nauk Ukrayins'koyi RSR, 1960, No. 3, pp.387 - 391

TEXT: The Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference) was held in Leningrad in 1959. It was dedicated to a wide range of problems of prospecting geophysics: new trends in the methods of prospecting various minerals, like non-ferrous and rare metals, development of modern geophysical equipment, rational methods of interpreting the results of geophysical investigations, new data on the geological structure of various regions, etc. All problems were discussed on plenary sessions and in four sections (structural geophysics, mining geophysics, geophysical equipment and device design, and industrial geophysics). The conference was opened by Professor V.V. Fedyns'kyy, Head of the Viddil heofizyky Ministerstva heolohiyi ta okhorony nadr SRSR (Department of Geophysics of the Ministry of Geology and Mineral Deposit Protection

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

of the USSR). In his report V.V. Fedyns'kyy elucidated the prospects of the development of geophysical prospecting methods, as well as the development of the prospecting of mineral deposits for the period 1959 - 1965. The plenary sessions heard the following reports: A.I. Zaborovs'kyy, Professor of the Moscow University on "The Present State and the Ways of the Development of Engineering Geophysics"; M.I. Sofronov of the Vsesoyuznyy instytut metodyky i tekhniky heofizychnoyi rozvidky - VITR (All-Union Institute of the Methods and Technique of Geophysical Prospecting - VITR) on "New Ways of the Development of Search-and-Prospecting Geophysics"; B.O. Andryeyev of the Leninhrads'kyy hirnychyy instytut (Leningrad Institute of Mining) on "Certain Problems and Vistas of the Development of Structural Geophysics"; O.A. Lohachov, Professor of the Leningrad Institute of Mining on "The Possibilities of Increasing the Efficiency of the Aeromagnetic Method During Geological Mapping and Searching for Mineral Deposits"; O.Z. Tunimanov of the zavod "Geologorazvedka", Leningrad (Plant "Geologorazvedka", Leningrad) "On the Tendency of the Design and Production of Geophysical Equipment", and others. Apart from this, the conclusive plenary sessions of the con-

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

ference heard the report by H.I. Petrashen' of the Leningrad University "On the Vistas of Applying the Dynamic Theory of Seismic Wave Propagation in the Seismographic Geophysical Exploration"; Yu.A. Dikhof of the Kazan' University on "The Tectonic Phenomena and Their Causes"; and O.V. Mukhin of the Trest "Ukrheofizrozvidka" (Trust "Ukrheofizrozvidka") on "The State and Development of the Geophysical Service in the Ukraine". In his report on the new trends in the search-and-prospecting geophysics, M.I. Sofronov presented interesting data on the design of modern geophysical equipment in a number of scientific research institutes: the All-Union Institute of Methods and Technique of Geophysical Prospecting, the Instytut fizyky zemli AN SRSR (Institute of the Physics of the Earth, AS USSR), and the Instytut avtomatyky AN URSR (Institute of Automation, AS UkrSSR). The report by Professor B.O. Andryeyev dealt with certain important problems and vistas of the development of structural geophysics (the study of the abysmal structure of the earth's crust, the search for oil- and gas-bearing structures, etc). I.H. Klushin of the Leningrad Institute of Mining read a report "On the Problem of Rating the Stratification Depth of a Crystalline Sub-

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

structure According to the Calculations of the Gravitational and Magnetic Anomalies Under the Conditions of the South-East of the Russian Plateau". The section of mining geophysics heard 18 reports dedicated to the development of theoretical argumentations and to new methods and equipment for searching ore bodies under various geological conditions. Some of these reports are: "The Increase in the Depth of Investigations in Mining Geophysics" by A.H. Tarkhov, Professor of the Moskovskyy heolohorozviduval'nyy instytut (Moscow Geological Prospecting Institute); "The Methods and Equipment of Prospecting Blind Mining Structures From Boreholes by Using the Method of Radioscopy" by L.M. Popov of the All-Union Institute of the Methods and Technique of Geophysical Prospecting (Leningrad); "The Experience Gathered in Applying High-Frequency Seismographic Geophysical Exploration Under the Conditions of the Ukrainian Crystalline Shield" by V.B. Solohub of the Instytut heolohichnykh nauk AN URSR (Institute of Geology, AS UkrSSR) and "On the Application of Gravity Prospecting at Ore Deposits" by D.H. Uspens'kyy. The reports by the workers of the All-Union Institute of Methods and Technique of Geophysical Prospecting (Leningrad), such as V.V. Polikarpoch-

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kin, M.A. Lapp, M.M. Yermolayev, D.V. Palfyerov, A.H. Sen'ko and others were dedicated to the methods of geochemical investigations when searching for gold ore, copper and nickel and rare metal deposits. The reports by A.H. Hramakov and V.S. Hlebovs'ka of the All-Union Institute of Methods and Technique of Geophysical Prospecting (Leningrad) investigated the problems which refer to the utilization of the emanation and gas survey when searching for ore deposits. B.M. Yanovs'kyy, Professor of the Leningrad University, Z.O. Krutykhovs'ka of the Institute of Geological Sciences, AS UkrSSR, and F.M. Yefimov of the Vsesoyuznyy naukovo-doslidnyy heolohorozviduval'nyy naftovyy instytut (All-Union Scientific Research Geological-Prospecting Petroleum Institute, Moscow) dedicated their reports to the elucidation of the problems of magnetism and paleomagnetism of rocks. The report of Z.O. Krutykhovs'ka,(Kiyev), was entitled "The Distribution of the Surplus Magnetization in Rocks of the Iron Ore Formation of the UkrSSR (On the Example of the Kremenchug Deposit)". Very interesting were the reports "The Equipment and Methods of Conducting an Aero-Electroprospecting" by M.M. Snuval-Sergyeyev of the All-Union Institute of Methods and Technique of Geophysical Prospecting

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

(Leningrad) and "The Experience Gathered in Applying High-Frequency Electro-Prospecting on the Deposits of Altay and Kareliya" by S.N. Sheynman of the All-Union Institute of Methods and Technique of Geophysical Prospecting (Leningrad). A total of 14 reports was heard by the section of structural geophysics: "The Geological Structure of the Crystalline Envelope of the Earth as it Appears According to Geophysical Data" by R.M. Demete'ka; "The Causes and the Mechanism of the Formation of Depressions of the Earth's Crust" by S.I. Subotin; "The Experience of the Regional Geophysical Work Done on the Example of Ust'-Urt" by Yu.M. Hrachov and others. A number of reports were dedicated to the seismographic investigations, particularly to the results of deep seismographic soundings (Yu.M. Hodin "Regional Complex Investigations on the Russion Plateau"; Q.S. Alekseyevey "On the Nature of the Basic Deep Waves Recorded by the HSZ Method") and to other new modifications of the seismographic geophysical exploration. A series of reports heard by the above-mentioned section dealt with new methods of mathematical interpretation and geological explanation of results of gravimetric and magnetometric investigations. A special section discussed the problems of

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

designing geophysical equipment and devices (11 reports). S.O. Piddubnyy and L.M. Lubymov of the All-Union Institute of Methods and Technique of Geophysical Prospecting (Leningrad) read on a new gradient-meter of the "GPB" (HRB) type and its utilization in geophysical prospecting. H.A. Petrov and M.R. Bal'son (Leningrad) reported on new developments of electro-prospecting equipment. Reports were also heard on a new type of a logging station, complete sets of aeroplane and automobile equipment for prospecting ore deposits, new aeromagnetometers, nuclear-resonant magnetoprospecting equipment and on new developments of seismographic equipment. A total of 5 reports was read in the section of industrial geophysics. Of special interest were the reports by D.M. Srebrodol'skyy (Moscow) and Professor V.M. Dakhnov (Moscow) which elucidated the present state and the ways of the future development of the methods of industrial geophysics. Very interesting were also the report by H.O. Cheremens'kyy of the Leningrad Institute of Mining on "The Determination of the Dislocation Zone of the Earth's Natural Thermal Field Around the Borehole and the Rating of Time Necessary for the Reproduction of Thermal Conditions". The final plenary session of the conference has

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On the Future Ways of the Development of Prospecting Geophysics in the Soviet Union [A Report Based on the Materials of the Vsesoyuzna heofizychna konferentsiya (All-Union Geophysical Conference)]

unanimously passed a resolution aimed at the future development of prospecting geophysics in the Soviet Union within the coming Soviet Seven-Year Plan.

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KUZHELOV, G.K.; KRUTIKHOVSKAYA, Z.A.

Formation of residual magnetism and its distribution in rocks. Sov. geol. 3 no.2:125-139 F '60. (MIRA 13:11)

1. Ukrgeofizrazvedka i Institut geologicheskikh nauk AN SSSR.
(Rocks--Magnetic properties)

KRUTIKHOVSKAYA, Z.A.; SHMIDT, N.G.; MAKEYEV, V.I., red.izd-va; IYERUSALIMSKAYA, Ye.S., tekhn.red.

[Geophysical methods of prospecting for iron-ore deposits] Geofizicheskie metody poiskov i razvedki zhelezorudnykh mestorozhdenii. Moskva, Gosgeoltekhizdat, 1961. 76 p. (MIRA 15:5)

(Prospecting—Geophysical methods) (Iron ores)

ZAVOYSKIY, V.N. [Zavois'kyi, V.M.]; KRUTIKHOVSKAYA, Z.A. [Krutykhovs'ka, Z.A.]

Effect of the anisotropism of magnetic susceptibility on the accuracy of residual magentism measurements. Dop. AN URSR no.6:736-739 '61. (MIRA 14:6)

1. Institut geologicheskikh nauk AN USSR. Predstavleno akademikom AN USSR V. G. Bondarchukom [Bondarchuk, V.H.].
(Magnetism—Measurement)

ZAVOYSKIY, V.N.; KRUTIKHOVSKAYA, Z.A.

Remanent magnetism of ferruginous quartzites in the southern termination of the Krivoy Rog synclinorium. Izv. AN SSSR. Ser. geofiz. no.8:1150-1157 Ag '61. (MIRA 14:7)

1. Akademiya nauk USSR, Institut geofiziki.
(Krivoy Rog region—Quartzite—Magnetic properties)

KRUTIKHOVSKAYA, Z.A. [Krutykhovs'ka, Z.O.]; SAVENKO, B.Ya.

Tracing the fault zone by geophysical methods. Geol.zhur. 21 no.6: 58-66 '61. (MIRA 15:2)

1. Institut geofiziki AN USSR.
(Dnieper Valley—Faults(Geology))(Dnieper Valley—Magnetic prospecting)

KRUTIKHOVSKAYA, Z.A.; ZAVOYSKIY, V.N.

Experience in studying the magnetization of ferruginous quartzites in the Kremenchug Magnetic Anomaly. Geofiz.sbor. no.1:85-98 '62. (MIRA 16:3)

1. Institut geofiziki AN UkrSSR.
(Dnieper Valley--Quartzite--Magnetic properties)

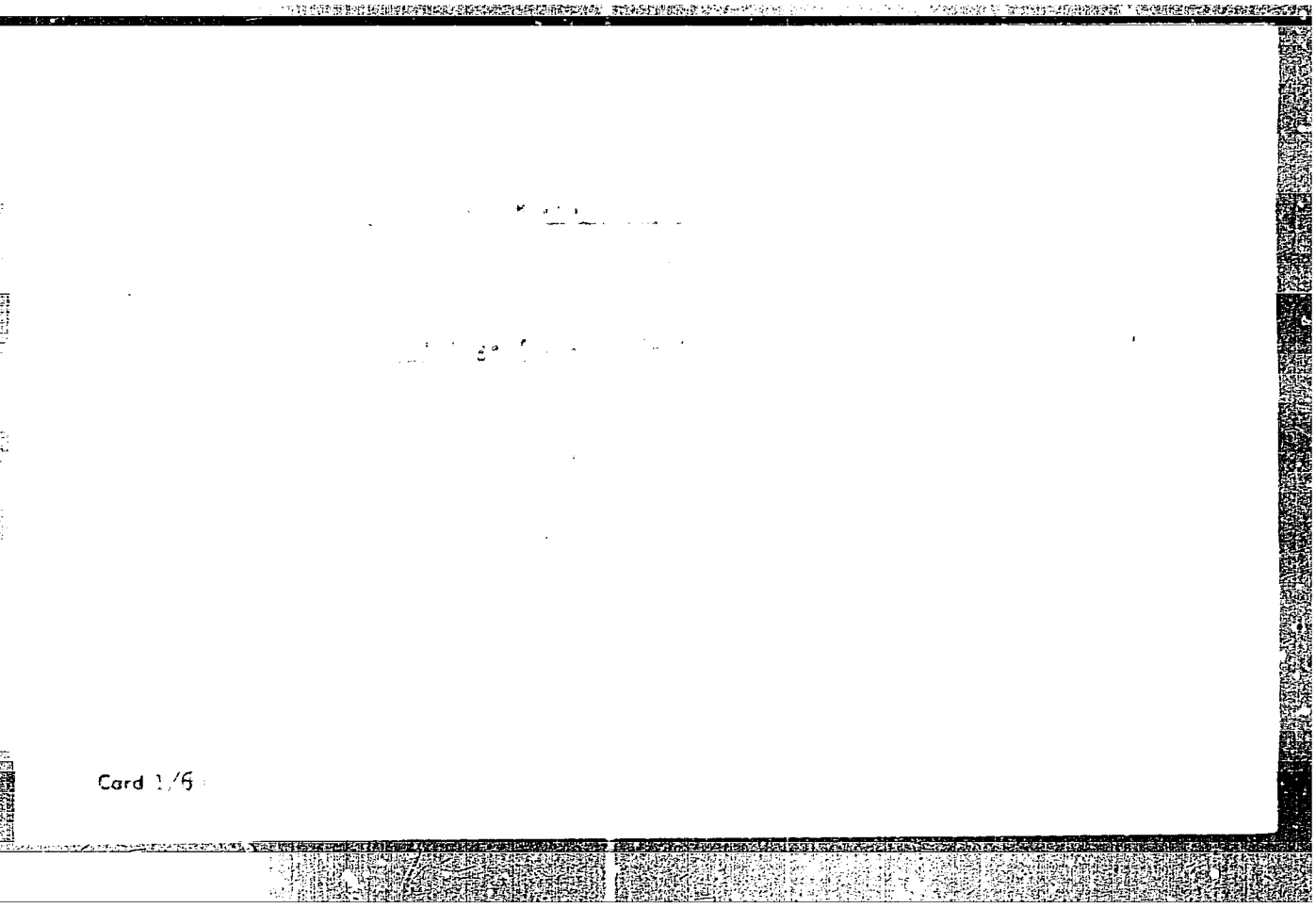
KRUTIKHOVSKAYA, Zoya Aleksandrovna; ZAVOYSKIY, Vladimir Nikolayevich; PODOLYANKO, Svetlana Mikhaylovna; SAVENKO, Boris Yakovlevich; SHMOTIN, S.I., akademik, otv. red.; SERDYUK, O.P., red.

[Magnetization of the rocks of iron ore formations of the Greater Krivoy Rog and Kursk Magnetic Anomaly] Namagnichennost' porod zhelezorudnykh formatsii Bol'shogo Krivogo Roga i KMA. [By] Z.A.Krutikhovskaia i dr. Kiev, Naukova Dumka, 1964. 178 p. (MIRA 18:2)

1. Akademiya nauk URSR, Kiev. Institut geofizyky.

MIKHAYLOVA, N.F.; KRUTIKHOVSKAYA, Z.A.

Determining the age of crystalline rocks according to their magnetization. Geofiz. sbor. no.9:44-51 '64. (MIRA 18:6)



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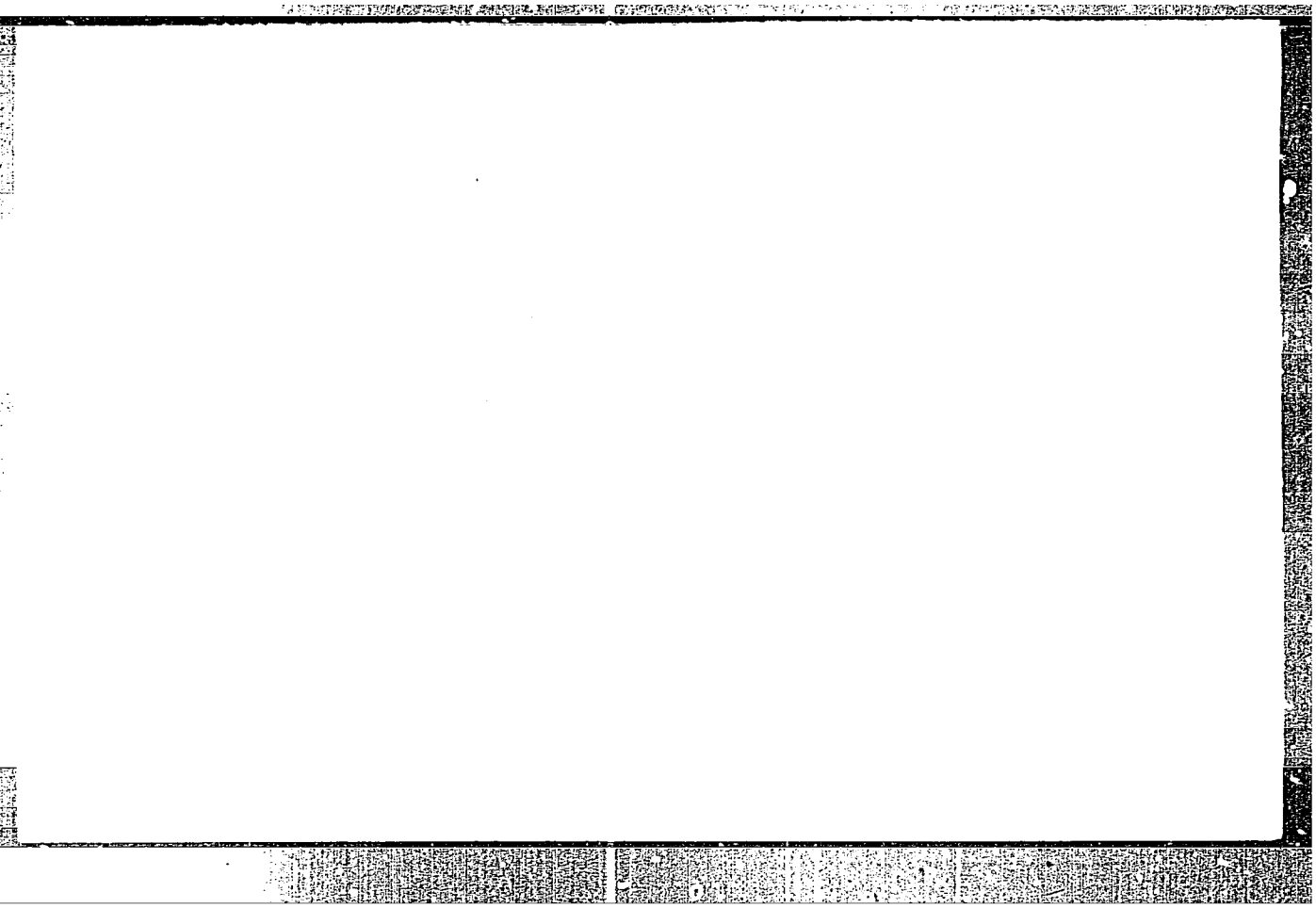

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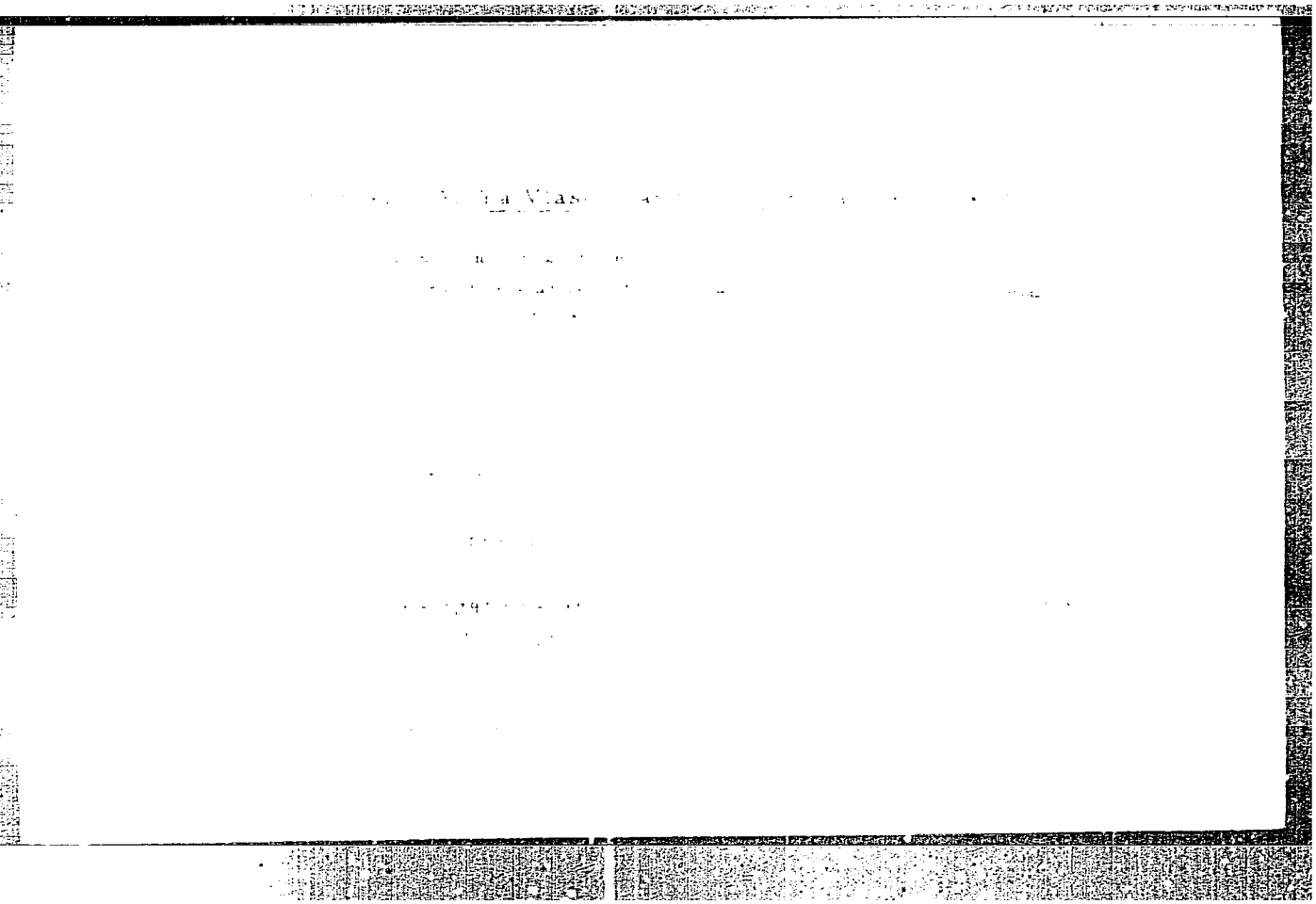

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ACCESSION NR: AT5007251

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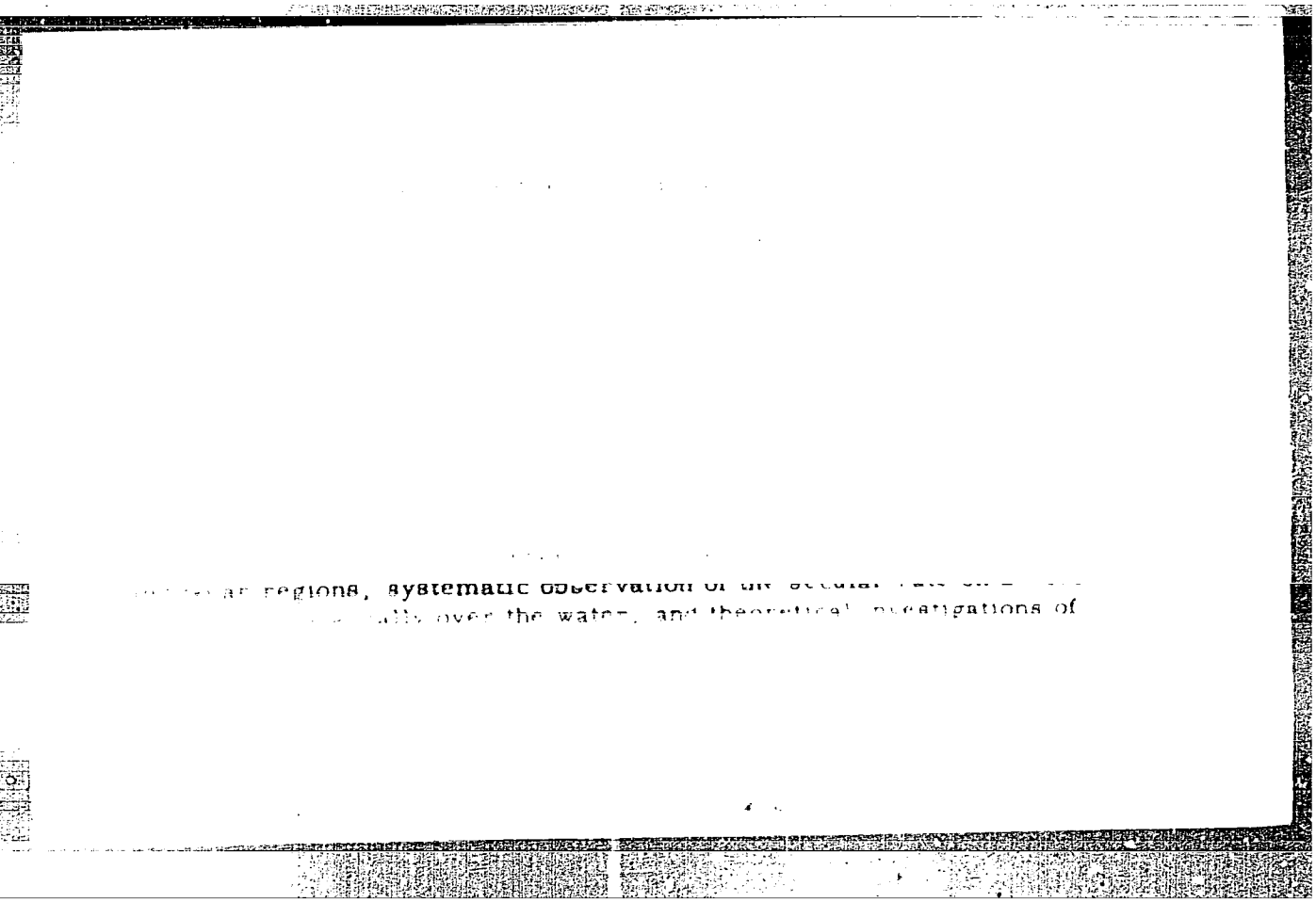

ar regions, systematic observation of the secular [illegible]
[illegible] over the water, and theoretical investigations of

ACC NR: AT6028384 (N) SOURCE CODE: UR/0000/65/000/000/0205/0213

AUTHOR: Krutikhovskaya, Z. A.; Kuzhelov, G. K.(Deceased); Shmidt, N. G.

ORG: none

TITLE: Geophysical methods of prospecting for Pre-Cambian iron ores in the Ukraine and Kursk magnetic anomaly

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologicheskiye rezul'taty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 205-213

TOPIC TAGS: iron ore, ferruginous quartzite, crystalline massif, variometer, physical geology, iron, prospecting, mapping

ABSTRACT: Among the great number of iron-ore deposits in the USSR, those associated with Pre-Cambrian ferruginous quartzites are very important. The most prominent areas of their development are the Ukrainian and Voronezhsky crystalline massifs. They are also found on other regions of the USSR: Kola Peninsula, Kazakhstan, and the Far East. A great contribution to iron-ore prospecting in Pre-Cambrian ferruginous-siliceous formations is made by geophysical methods. All modern geophysical methods are used: magnetic (airborne and land), gravity, variometer, seismic, and resistivity prospecting as well as logging

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ACC NR: AT6028384

methods. The significance of geophysical methods is particularly great because of the fact that the rocks of ferruginous-siliceous formations are, with rare exceptions, covered by unconsolidated sediments whose thickness varies from a few to many hundred meters. Therefore, all problems connected with the discovery of iron-ore deposits, such as searching and outlining areas of ferruginous quartzites and exploration of the structure of ore fields and deliniation of rich ores, can be solved by a combination of geophysical and geological surveys. The experience of using geophysical methods for investigations of ferruginous-siliceous formations of the Ukraine and Kursk magnetic anomaly has shown that these methods can be successfully applied to solving the following problems: 1) location of geological formations controlling mineralization and mapping the rocks of ferruginous-siliceous formations, such as ferruginous quartzites, schists, and dolomites as well as granites, amphibolites, and gneisses (case histories); 2) investigation of principal structural features - - closures of folds, undulations of fold axes, classification of fold structures, location of faults, detection of the depth of the lower limits of ferruginous quartzites (case histories); 3) selection of areas promising for high-grade ores according to established data (cases histories); 4) investigation of hidden relief of Pre-Cambrian formation and determination of thicknesses of the overlying sedimentary

Card 2/2

ACC NR: AT6028384

strata; 5) more accurate definition of contacts, structure, and composition of ore deposits from the data of complex borehole surveying (case histories). Orig. art. has: 3 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65/ ORIG REF: 010

Card 2/2

KRUTIKHOVSKIY, N. A.

Bees

Rare case. Pchelovodstvo 30, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

PHASE I BOOK EXPLOITATION SOV/4263

Krutikhovskiy, Vadim Getrovich, and Igor' Petrovich Nikonov

Kontrol' svarnykh soyedineniy (Inspection of Welded Joints) Moscow, Mashgiz, 1959. 54 p. (Series: Nauchno-populyarnaya biblioteka rabochego-svarshchika, vyp. 25). 12,000 copies printed.

Reviewer: B. P. Zakharov; Ed.: K. A. Yes'kov, Docent; Tech. Ed.: N. A. Dugina; Exec. Ed. (Ural Siberian Division, Mashgiz): A. V. Kaletina, Engineer.

PURPOSE: This booklet is intended for welders.

COVERAGE: This issue (the 25th) of the Popular Science Library for the Welder series contains a description of various methods of inspection used in the production of welded structures. The authors discuss the basic principles and operation of equipment used to inspect welded seams and structures. No personalities are mentioned. There are 6 references, all Soviet.

Card 1/4

KRUTIKHOVSKIY, Vadim Germanovich; KOZLOV, Nikolay Alekseyevich; KOCHEVA, G.N., inzh., retsenzent; KHOVANETS, V.K., inzh., red.; DUGINA, N.A., tekhn. red.

[Semiautomatic welding in a carbon dioxide medium] Poluavtomaticheskaia svarka v srede uglekislogo gaza. Moskva, Mashgiz, 1962. 151 p. (MIRA 15:7)

(Electric welding)

GAMIKOV, V.I., inzh.; KRUTIKHOVSKIY, V.G., inzh.; MIKHAYLOV, S.I., kand. tekhn.nauk; SOKOLOV, P.S., kand.tekhn.nauk; TARLINSKIY, I.V., kand.tekhn.nauk

Use of aluminum alloys in the construction of freight cars. Zhel. dor.transp. 45 no.10:47 O '63. (MIRA 16:11)

KRUTIKHOVSKIY, V.K. [deceased].

Experiment in fertilizing winter wheat on sandy loam turf-Podzolic soils ("Koles" Collective Farm) [with French summary in insert]. Pochvovedenie no.5:50-56 My '56. (MLRA 9:9)

1.Dmitrovskiy sortouchastok Goskomissii po sortoispytaniyu sernovykh kul'tur Moskovskoy oblasti.
(Podzol) (Fertilizers and manures) (Wheat)

KRUTIKOV, A.; SELISHCHEV, G.; GABIS, V.; LIBERMAN, A.; KOMNOVA, L.; BUT, A.; SUTANKIN, A.; ZHEROMSKAYA

Unremitting attention to self-service stores! Sov.torg. 33 no.7:12-13 Jl '60. (MIRA 13:7)

1. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.65 (for Krutikov). 2. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.64 (for Selishchev). 3. Direktor magazina No.65 Moskvoretskogo RPT (for Gabis). 4. Direktor moskovskoy bulochnoy No.44 (for Liberman). 5. Direktor moskovskoy bulochnoy No.367 (for Komnova). 6. Direktor moskovskogo magazina samoobsluzhivaniya "Mosovoshch" (for But). 7. Direktor moskovskogo magazina samoobsluzhivaniya No.78 "Mosmoloko" (for Sutankin). 8. Zamestitel' direktora magazina No.22 "Ogonek" Sverdlovskogo RPT (for Zheromskaya).

(Self-service stores)

KRUTIKOV, A.B.

2

PHASE I BOOK EXPLOITATION SOV/5820

Galkin, N. P., A. A. Kayorov, U. D. Veryatin, D. N. Sudarikov, N. S. Nikolayev, Yu. D. Shishkov, A. B. Krutikov

Khimiya i tekhnologiya ftoristykh soyedineniy urana (Chemistry and Technology of Uranium Fluoride Compounds) Moscow, Gosatomizdat, 1961. 347 p. Errata slip inserted. 4500 copies printed.

Ed. (Title page): N. P. Galkin, Doctor of Technical Sciences, Professor; Ed.: N. A. Korobtsova; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for chemical and nuclear engineers and teachers and students of schools of higher education.

COVERAGE: The monograph reviews Soviet and non-Soviet literature published up to June 1960 on the physicochemical properties of uranium fluorides and methods of producing them from salts, oxides, and metallic uranium. Methods of processing uranium chemical concentrates to the tetra- and hexafluorides, which are initial products in the production of nuclear fuel,

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Chemistry and Technology of Uranium (Cont.) UNCLASSIFIED

are of primary interest. Fluoride methods are preferred to hydrometallurgical methods because radioactive waste solutions in the former are either reduced to a minimum or eliminated. No personalities are mentioned. References accompany individual chapters.

TABLE OF CONTENTS:

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Ch. I. Physicochemical Properties of Uranium Fluoride Compounds	11
Ch. II. Production of Uranium Tetrafluoride From Aqueous Solutions	53
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Card 2/3

MOROZOV, N.; SHIROKOV, A.; LIVSHITS, V.I.; prepodavatel'; KRUTIKOV, A.D.; KOLBIN, V.

The magazine "Sovetskaia potrebitel'skaia kooperatsiia." Sov. torg. no.10:50-54 O '57. (MIRA 10:11)

1. Zamestitel' direktora po nauchnoy chasti Nauchno-issledovatel'skogo instituta torgovli i obshchestvennogo pitaniya (for Morozov). 2. Rukovoditel' raboty, starshiy nauchnyy sotrudnik Nauchno-issledovatel'skogo instituta torgovli i obshchestvennogo pitaniya (for Shirokov). 3. Tekhnikum sovetskoy torgovli v Pyatigorske (for Livshits). 4. Direktor Moskovskogo magazina samoobsluzhivaniya No.65 "Gastronom" (for Krutikov). 5. Zamestitel' nachal'nika Upravleniya torgovli prodovol'stvennymi tovarami Leningrada (for Kolbin).

(Cooperative societies--Periodicals)

18.7400

78229
SOV/80-33-3-30/47

AUTHOR: Krutikov, A. F.

TITLE: A Method of Improving Anticorrosion and Antifriction Properties of Protected and Unprotected Surfaces of Manufactured Articles

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 685-690 (USSR)

ABSTRACT: An improved phosphatizing method was developed by the author. The phosphatizing bath consisted of the following (in g/liter): Na_2CO_3, 2-3; $Zn(NO_3)_2 \cdot 6H_2O$, 150; preparation "Mazhef" (mixture of $Mn(H_2PO_4)_2$ and $Fe(H_2PO_4)_2$ containing 46-52% P_2O_5, 14% Mn, 3% Fe, about 22% moisture), 30. The temperature of the bath was 50-60° C, time of immersion 10-15 minutes. The articles to be treated were sandblasted, heated in water to 85-90° C, phosphatized, washed, immersed for 5 min in

Card 1/2

A Method of Improving Anticorrosion and Antifriction Properties of Protected and Unprotected Surfaces of Manufactured Articles

78229
SOV/80-33-3-30/47

a 9% solution of $K_2Cr_2O_7$ at 85-95° C, washed with hot water, immersed for 3 min in a solution of soap (50 g/liter) and soda (5 g/liter) at 80-90° C, dried in a dryer at 105-120° C, and coated with technical vaseline, grease, or 10% solution of organic silicon preservative GKZh 94. Oxide and black phosphatizing is also described. The above methods gave a fine crystalline coating which had better anticorrosion, antifriction, and bonding properties than those obtained with standard methods. There are 5 Soviet references.

SUBMITTED: May 15, 1959

Card 2/2

1.1800

24071
S/073/61/027/003/003/004
B103/B203

AUTHOR: Krutikov, A. F.

TITLE: Black Parkerizing

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 27, no. 3, 1961, 414 - 417

TEXT: The author developed a method of protection against corrosion since the hitherto usual Parkerizing methods fail in various media, e.g., in exposure to atmospheric influences. The new method provides for an additional treatment of workpieces in a passivating phosphate solution. A solid phosphate coat, practically free of pores, is formed on their surface by double phosphatizing in solutions of various compositions combined with a soap soda solution. Oxide-coated, cadmium-coated, and galvanized, as well as unprotected steel workpieces obtain increased protective and antifriction properties by phosphate passivation. The author elaborated the following procedure: (A) Cleaning with a sandblast unit, or pickling with 15 % HCl-solution, neutralizing with 5 - 10 %

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Black Parkerizing

soda solution, and subsequently in hot soap solution (20 g/l) and soda (30 - 50 g/l). $Na_3PO_4 \cdot 15H_2O$ or $Na_2HPO_4 \cdot 12H_2O$ may be used instead of soda in both cases. (B) Prescription. The acid oxide coating is made in solution no. 1 (in g/l): Steel cuttings, grade M 50 (M 50) 4 - 8, zinc white, type M 1 (M 1), or ZnO chemically pure, 7.5 - 15, orthophosphoric acid 43 - 78; ratio Zn : Fe $\approx$ 2, free acidity 10 - 18 points. Working temperature of the solution 92 - 98°C, time of treatment 10 min. Preparation of the concentrate. The steel cuttings and one-third of the amount of zinc white are simultaneously placed in the bath, the acid is diluted with water 1 : 2, poured in, and the solution heated to 70 - 90°C. Complete dissolution of cuttings is waited for, and then the rest of zinc white is added. The concentrate is introduced in the working bath, and the latter is filled up with water to the volume intended. The following substances are used to correct the solution: zinc white M1 1.5 g, and ortho-phosphoric acid 3.7 g per 1 liter of solution when the total acidity has dropped by 5 - 8 points. The temperature increase after immersion of workpieces effects a higher strength of the protective coat. Variant of the solution (in g/l):

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B103/B203

Black Parkerizing

ZnO 20 - 40; H_3PO_4 125 - 250; $Zn(NO_3)_2 \cdot 6H_2O$ 200 - 400; $Fe(NO_3)_3 \cdot 9H_2O$ 5 - 10; $Na_2HPO_4 \cdot 12H_2O$ 3 - 6; temperature 80 - 100°C, time of treatment 2 min.

The author developed three prescriptions for phosphate passivation (in g/l): (a) Na_2CO_3 2 - 3, Mazhef preparation 30; $Zn(NO_3)_2$ 150, temperature 50 - 60°C, time of treatment 10 min, total acidity at least 80 points, free acidity 2 - 4 points; (b) Na_2CO_3 8; Mazhef 100; $Zn(NO_3)_2$ 300, temperature 50 - 60°C, time 10 min; (c) Na_2CO_3 10, Mazhef 150, $Zn(NO_3)_2$ 300, temperature 15 - 40°C, time 15 - 20 min. After complete dissolution of soda in water, Mazhef and zinc nitrate are introduced at the same time. The solutions must not be heated above the working temperature. Addition for correction: when the acidity drops to the lower limit: Na_2CO_3 0.5 g, Mazhef 5 g, $Zn(NO_3)_2 \cdot 6H_2O$ 25 per 1 liter. Higher concentrations favor the stability of the solution. Solution (b) gives the best results. The solubility of oxide coats in the passivating solution can be reduced by adding soda and, thus, decreasing the free

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Black Parkerizing

acidity. (C) Treatment. Heating of workpieces in hot water, phosphatizing in solution no. 1, rinsing in water, treatment with 9 % $K_2Cr_2O_7$ solution (temperature 85 - 95°C, time 5 min), rinsing in water, treatment with soap soda solution (soap 30 g/l, Na_2CO_3 25 g/l, 80 - 90°C, 3 min), heating in hot water, passivation in solution (b) or (a), rinsing in water, treatment with soap solution (soap 50 g/l, Na_2CO_3 5 g/l, 80 - 90°C, 3 min), drying, greasing in hot state. Instead of greasing, workpieces may be soaked in organosilicon hydrophobic liquid ГКЖ-94 (GKZh-94), dissolved in benzine (90 - 110°C, 30 min). The corrosion resistance of these coats was compared with coats of quick phosphatizing (3 - 5 % of Mazhef with 50 - 60 zinc nitrate per 1 liter) without greasing. For this purpose, the author used steel plate specimens of carbon steel 50 and of steel alloy type 30ХН2МФА (30KhN2MFA), hardened to 45 - 50 HR_c, and mass-produced workpieces. They were exposed to the action of 3 % NaCl solution by full immersion and alternate wetting (3 min) and standing in air for 27 min (repeatedly). Before testing, specimens were degreased in benzine. The following results were found visually: On specimens phosphatized by the author's

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Black Parkerizing

method, corrosion appeared as fine dots or small spots which subsequently slightly increased in size. On specimens submitted to quick phosphatizing, however, corrosion appeared as large and numerous spots which extended much more intensively, and finally covered the major part of the surface. Mass-produced workpieces phosphatized by the new procedure showed, after six months in the open air, slight corrosion and were suitable for further use. Quick-phosphatized workpieces were much more rusted and, therefore, useless. There are 2 tables and 3 Soviet-bloc references.

SUBMITTED: May 13, 1959

Card 5/5

KRUTIKOV, A.F., inzh.

Cold parkerizing. Mashinostroenie no.1:72-74 Ja-F '62.
(MIRA 15:2)
(Phosphate coating)

KRUTIKOV, A.F.

Electrochemical study of the process of phosphatation and the investigation of the mineralogical composition of phosphate coatings. Zhur. prikl. khim. 37 no.6:1273-1278 Je '64.

(MIRA 18:3)

EWT(m)/EWP(t)/EWP(b) JD

ACCESSION NR: AP4041795

[illegible], A. F.

[illegible] forming phosphate [illegible]

[illegible] phosphate coating, [illegible]

[illegible] The mechanism of forming [illegible]

[illegible] immersing [illegible]

[illegible] surface [illegible]

[illegible] As the cathod[illegible]

with a thin phosphate film impermeable to metal ions but penetrated

ACCESSION NR: AP4041795

clean metal surface. Upon immersion a soda-soda treated surface in a phosphatizing solution the latter interacts with

Card 3/3

KRUTIKOV, A.G., dotsent

Measures for obtaining high flax yields. Sbor.nauch.trud. Ivan.sel'khoz.inst. no.16:96-101 '58. (MIRA 13:11)

1. Kafedra rasteniyevodstva Ivanovskogo sel'skokhozyaystvennogo instituta.
(Flax)

USSR/ Engineering-Welding

Card : 1/1

Authors : Kazennov, Yu. I., Cand. of Tech Sciences; Krutikov, A. N., Engineer; Kolosova, L. P., and Dmitriev, P. T.

Title : Ways of increasing production in manual arc-welding of acid-resistant steels type 18-8

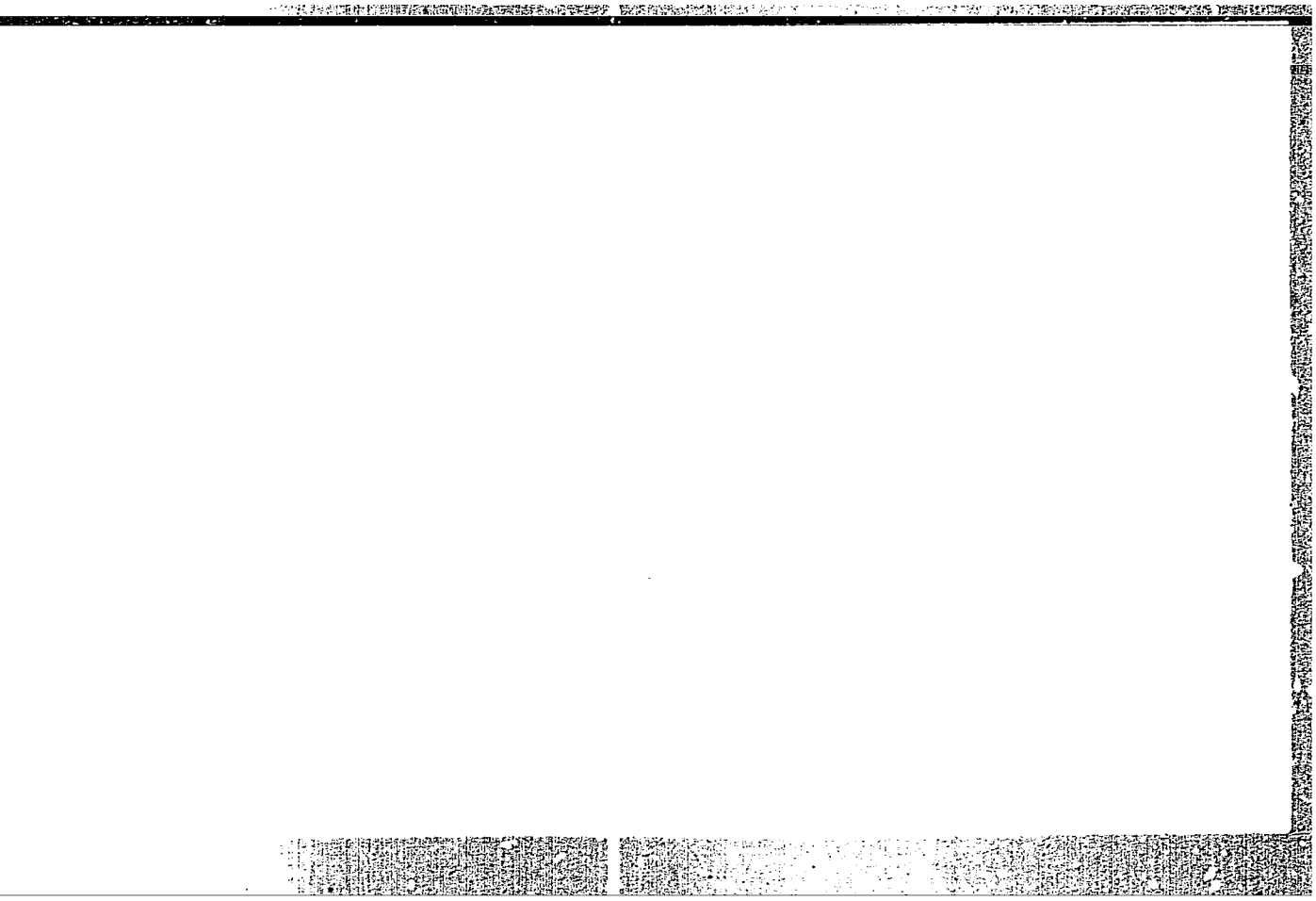
Periodical : Vest. Mash. 34/5, 74 - 77, May 1954

Abstract : For the purpose of speeding up production researches were conducted in the arc-welding of steel, with 3-phase current of increased amount, using multiple electrodes. The larger flow of current increases the amount of melted material and speeds up the welding process. Each step is explained and formulas are given. It was found that the multiple-arc method increased the production by 50%. Seven Russian references, latest 1951. Tables; graphs.

Institution : ....

Submitted : ....

Evaluation B-83422, 8 Nov 55



APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000826810016-9"

"Investigation of the Weldability of High Chromium Steel." Cand Tech Sci, Moscow Order of Labor Red Banner Higher Technical School imeni Bauman, Min Higher Education USSR, Moscow, 1955. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

SOV/137-57-6-10217

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 118 (USSR)

AUTHOR: Krutikov, A.N.

TITLE: An Investigation of the Weldability of Semi-ferritic Steel EI428 (Issledovaniye svarivayemosti poluferritnoy stali EI428)

PERIODICAL: Sb. statey. Vses. n.-i. i konstrukt. in-t khim. mashinostr., 1956, Vol 20, pp 8-19

ABSTRACT: The weldability of steel EI428 containing $\leq$ 0.15% C, 1.2-1.8% Si, $\leq$ 0.5% Mn, 5.5-7.0% Cr, $\leq$ 0.2% Ni, 0.7-1.0% Al, 0.03% S, and 0.03% P was investigated. Welding rods of Kh5M and EI428, containing reduced quantities of C, S, and P and covered with a TsL-2 coating, were employed together with electrodes of steel EI400 (with a UONI-13/NZh coating) of the following composition: 0.07% C, 1.0% Si, 1.17% Mn, 16.2% Cr, 12.12% Ni, and 2.54% Mo. The effect of the thermal welding cycle (TWC) on the structure and properties of steel was also studied. Diagrams representing the displacement of the γ region as a function of the concentration of C, Si, and Al are shown, and mechanical properties of steel after it has been subjected to various heat-treatment procedures are

Card 1/2

An Investigation of the Weldability of Semi-ferritic Steel EI428

described [in the original state σ_b = 59.9 kg/mm^2, δ = 20.4%, ψ = 53.9%, a_k = 0.74 kgm.cm^2 (at 20°C), a_k = 21.9 kgm/cm^2 (at 150°C)]. The influence of the TWC on the metal in the weld zone was studied on specimens which were heated to a temperature of 1300-1350° in an HF induction device for a period of 20 seconds and in a salt bath for a period of five minutes; the specimens were cooled between steel plates as well as in the air. The a_k and the hardness were determined immediately after the TWC (at 150° $a_k \leq 12.0$ kgm/cm^2) and heat treatment (at 150° $a_k > 25$ kgm/cm^2) had been completed. Technological testing of electrodes was performed during welding operations employing a reversed-polarity current of 30-35 amperes per 1 mm of metal thickness. During welding with electrodes of EI428 wire, intense burning of Al (from 0.95 to 0.16%) was observed, together with a transition of the weld metal from a semiferritic structure to a structure characterized by complete phase transformation. It is recommended that filler metal of the Kh5M type be employed during welding. A heat-treatment procedure consisting of a protracted low anneal at 750° or a standard anneal at 850° followed by slow cooling to a temperature of 650° is recommended as a means of increasing the plasticity of the welded joint.

V.B.

Card 2/2

KRUTIKOV, A.N., kand.tekhn.nauk

Electric arc welding of X17 high-chromium steel of the semiferrite class. Trudy NIIKHIMMASH no.26:34-44 '58.
(MIRA 13:7)

(Chrome steel—Welding)

L 15499-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD
ACCESSION NR: AR3001634 S/0137/63/000/004/I081/I081

SOURCE: RZh. Metallurgiya, Abs. 4I443

58
57

AUTHOR: Krutikov, A. N.

TITLE: The characteristics of the corrosive behavior of the heat-affected zone of high-chromium steel

CITED SOURCE: Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr, no. 33, 1960, 72-84

TOPIC TAGS: corrosive behavior, heat-affected zone, high-chromium steel, 1Kh13, 2Kh13, 4Kh13 copper sulphate

TRANSLATION: In the heat-affected zone of welded joints of high-chromium steel grades 1Kh13, 2Kh13 and 4Kh13, one or two zones with an increased tendency toward corrosion arise under the action of a concentrated source of heat, depending upon the condition of the metal. These zones develop during boiling of specimens in a solution of copper sulphate acidified with H_2SO_4. The influence of the structural state of the steel is shown by the fact that the steel which

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ACCESSION NR: AR3001634

has been subjected to annealing or quenching before welding with high-temperature annealing, produces in the heat-affected zone one narrow (1st) corrosion zone and the steel which has been hardened and low-temperature annealed produces two zones which are bounded by a zone stable metal. There is a direct relation between the nature of the hardness change in the heat-affected zone and the position of the corrosion zones which is manifest in the fact that the second, wide corrosion zone and the stable-state metal zone cover the entire portion of the curve of hardness drop and the first, narrow corrosion zone coincides with the beginning of the rise of the hardness curve. The second, wide corrosion zone appears only in the event that the source of heat, which acts upon the steel, causes additional annealing. The emergence of the first corrosion zone is not associated with the initial structural state and is caused by quenching. The lower temperature limit of the second corrosion zone occurs when heating above 500°C and the upper, heating at 700°. This same temperature is also the lower temperature limit of the stable-state metal zone. Failure occurs in the second zone under the action of both general and intercrystalline corrosion and in the first zone also under the influence of the stress state. The tendency of the zone near the seam to corrode can be eliminated

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L 15499-63
ACCESSION NR: AR3001634

by quenching and annealing at 700°C or by annealing alone at 700°. HNO_3 does not cause local corrosive failure of the joints welded from high-chromium steel regardless of the tendency of the separate sectors of the heat-affected zone to corrode. 'Author's summary.

DATE ACQ: 20 May 63 SUB CODE: ML ENCL: 00

Card 3/3

S/184/61/000/006/003/005
D041/D113

AUTHOR: Krutikov, A.N., Candidate of Technical Sciences, Akshentseva, A.P., Candidate of Technical Sciences, Volikova, I.G., Engineer

TITLE: Some data on the weldability and the corrosion resistance of Kh17T and Kh17N2 steels

PERIODICAL: Khimicheskoye mashinostroyeniye, no. 6, 1961, 33-38

TEXT: The results are given of experimental investigations carried out in order to obtain data on the weldability and corrosion resistance of Х17Н2 (Kh17N2) and Х17Т (Kh17T) steels. The impact toughness of both steels was determined within a temperature range of -40 to +100°C. The threshold of cold shortness of Kh17T steel lies near 0°C; Kh17N2 steel shows no tendency to cold shortness within the above-mentioned temperature range. Some time ago, high-chromium steels with a ferrite structure were manufactured with a low impact toughness; now, the TsNIIChM Institut (Institute) and the "Krasnyy Oktyabr'" Zavod (Plant) manufacture Kh17T steel with a threshold of cold shortness near 0°C and lower. The impact toughness was also investigated during short-term heating of the steel specimens to 300-900°C in a salt vat and subsequent cooling in the air; a sharp decrease in the impact toughness was observed; the longer the heating time, the lower is the normalizing temperature at which this decrease occurs. Annealing at 300-700°C or repeated

S/184/61/000/006/003/005
D041/D113

Some data on the weldability ....

heating within the 700-900°C range increases the impact toughness of Kh17N2 steel; no considerable improvements were observed in the case of Kh17T steel. The impact toughness of separate parts of the heat-affected zone of welded joints was also investigated. Part of the specimens were examined immediately after welding, part of them were annealed at 750°C for 0.5 hours. Kh17T steel has an impact toughness of approximately 1 kg/cm^2 in the weakness zone and heat treatment does not increase this toughness. Multilayer-welded Kh17N2 steel has a high impact toughness in the weakness zone; heat treatment slightly increases the impact toughness of the heat-affected zone. The ЦЛ11 (TsL11) electrode is recommended since it ensures the highest corrosion resistance in the weld metal. In order to obtain corrosion resistance data on the above-mentioned steels, laboratory investigations of welded joints were carried out using the following aggressive media: HNO_3, HCOOH, $C_2H_2O_4$, H_3PO_4 and CH_3COOH. At all the investigated temperatures and concentrations of CH_3COOH, the Kh17T and Kh17N2 steels are corrosion resistant, the corrosion resistance of the welded joints being the same as that of the base metal. In HCOOH, the steels have either a reduced resistance or low resistance. The corrosion resistance of the heat-affected zone of the welded joints is the same as that of the base metal. Welds produced by the ВИ12-6 (VI12-6) and the ЭНТУ-3 (ENTU-3) electrodes corrode more intensively than the base metal; welds containing niobium and welded with the TsL11 electrodes corrode less. In boiling $C_2H_2O_4$ solutions,

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Some data on the weldability .....

S/184/61/000/006/003/005
D041/D113

only Kh17T steel was tested; it had a corrosion rate of 10-70 mm/year. Under operating conditions of an evaporator producing alkali substances by the electrolytic method(composition of the solution - 320-340 G/l of NaOH, 90 G/l of NaCl, 0.2-0.3 G/l of $NaClO_4$; temperature - 90°C; velocity of the medium -- 0.8-1 m/sec) the Kh17T steel proved to be a corrosion-resistant material. This steel can also be used with an evaporator in which light oils are separated from acid-containing water during the production of acetic acid. There are 9 figures, 5 tables, and 10 Soviet-bloc references.

Card 3/3

33569
S/135/62/000/002/003/010
A006/A101

1.2300 1573

AUTHORS: ~~Krutikov, A.N.~~, Candidate of Technical Sciences, Arest, T.V., Engineer, Kristal, M.M., Engineer

TITLE: On the problem of welding and corrosion resistance of steel-copper, steel-bronze and steel-brass bimetals

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1962, 15 - 17

TEXT: The authors investigated the possibility of using steel, clad with copper and its alloys, in chemical machinebuilding. Since the use of bimetals presents some advantages over coating the steel with copper and its alloys, the weldability of steel-copper, steel-bronze and steel-brass bimetals was investigated and a welding technology was developed. Copper, brass and bronze can be gas- and arc-welded. In the latter case metal or carbon electrodes are used; for argon-arc welding non-consumable electrodes should be employed and automatic welding should be performed with a submerged arc. A carbon-arc is widely used for welding brass. Welding copper and bronze with a metal electrode is performed on d-c of reverse polarity, and brass on d-c of direct polarity; argon-arc welding is in all cases performed on current of direct polarity. Conditions of weld-

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33549
S/135/62/000/002/003/010
A006/A101

On the problem of welding ...

ing copper depend on the number of factors including thickness, shape and dimensions of the parts to be welded, chamfering of the edges, etc. Since copper is prone to porosity and embrittlement, and has high heat-conductivity, tight and plastic joints can not be obtained when welding copper that contains over 0,01% oxygen. When welding 10 mm thick bimetals, the edges should be asymmetrically double V-shaped, and the chamfering angle should be 30-35°. High-quality weld joints are produced by automatic submerged-arc welding with an electrode wire of 2 mm in diameter, having the same composition as the base-metal. Mechanical and corrosion tests of the weld joints yielded the following results: in welding copper and brass, considerable grain growth takes place in the weld-adjacent zone; grain growth is not observed in bronze. Bronze and brass do not yield a distinct fusion boundary, which is very distinct in copper. In manual welding of a cladding layer a non-ferrous metal does not penetrate into the steel. In automatic welding the steel is overheated in a number of cases, grain growth takes place and Widmannstaetten structure is formed. In the case of intensified welding conditions, non-ferrous metals penetrate into the steel seam to a depth of 2 - 3 grains. Corrosion tests showed that the corrosion resistance of steel-copper and steel-brass bimetals exceeds that of the base metal. The corrosion resistance of welds with a bronze cladding layer in acetic acid, after manual arc welding, is equal to that

Card 2/3

On the problem of welding ...

of the base metal. It is somewhat lower after automatic welding. Bronze welds are sometimes prone to structural corrosion; if proper welding conditions have been selected this defect is not observed. There are 5 tables, 5 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: NIIKhIMMASh

X

Card 3/3

S/137/63/000/003/005/016
A006/A101

AUTHORS: Krutikov, A. N., Akshentseva, A. P., Volikova, I. G., Zharov, A. I.

TITLE: Properties of grade X17T (Kh17T) ferrite high-chromium steel weld joints

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1963, 9, abstract 3E49 ("Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr.", 1962, no.38, 52 - 63)

TEXT: Considering low a_k (1 kgm/cm^2) in the heat-affected zone, ferrite Kh17T steel is recommended to be used for manufacturing equipment that is not subjected to dynamic loads. Heat treatment does not raise a_k of this steel. The heat affected zone of Kh17T steel welds is not prone to intercrystalline corrosion. The basic electrode for welding Kh17T steel is the ЦЛ11/ св-1Х18Н9Б (TsL11/sv-1Kh18N9B) electrode, securing high corrosion resistance of the weld metal and mechanical properties equalling those of the base metal.

[Abstracter's note: Complete translation]

V. Fomenko

Card 1/1

S/137/63/000/003/013/016
A006/A101

AUTHORS: Akshentseva, A. P., Krutikov, A. N.

TITLE: The effect of heat treatment upon the structure and corrosion resistance of X17 H2 (Kh17N2) and X 17 T (Kh17T) stee

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1963, 68, abstract 3I368 ("Tr. Vses. n.-i. konstrukt. in-t khim. mashinostr.", 1962, no. 40, 101 - 112)

TEXT: The composition (in %) and the mechanical properties of the investigated steel grades are given: Kh17T - C 0.07, Mn 0.60, Si 0.51, Cr 17.78, Ni 0.42, Ti 0.71, σ_b 52 kg/mm^2, σ_s 40 kg/mm^2, δ 25%; Kh17N2 - C 0.10, Mn 0.59, Si 0.50, Cr 17.68, Ni 1.96, σ_b 123 kg/mm^2, σ_s 108 kg/mm^2, δ 13.5%. Kh17N2 steel, subjected to quenching and low tempering at 275 - 300°C does not reveal intercrystalline corrosion in a boiling sulfuric acid solution of blue vitriol. Welded joints of this steel are prone, during multi-pass welding, to structural-selective and intercrystalline corrosion. Heat treatment of welded joints (tempering at 680 - 700°C) increases corrosion resistance in the weld-adjacent zone,

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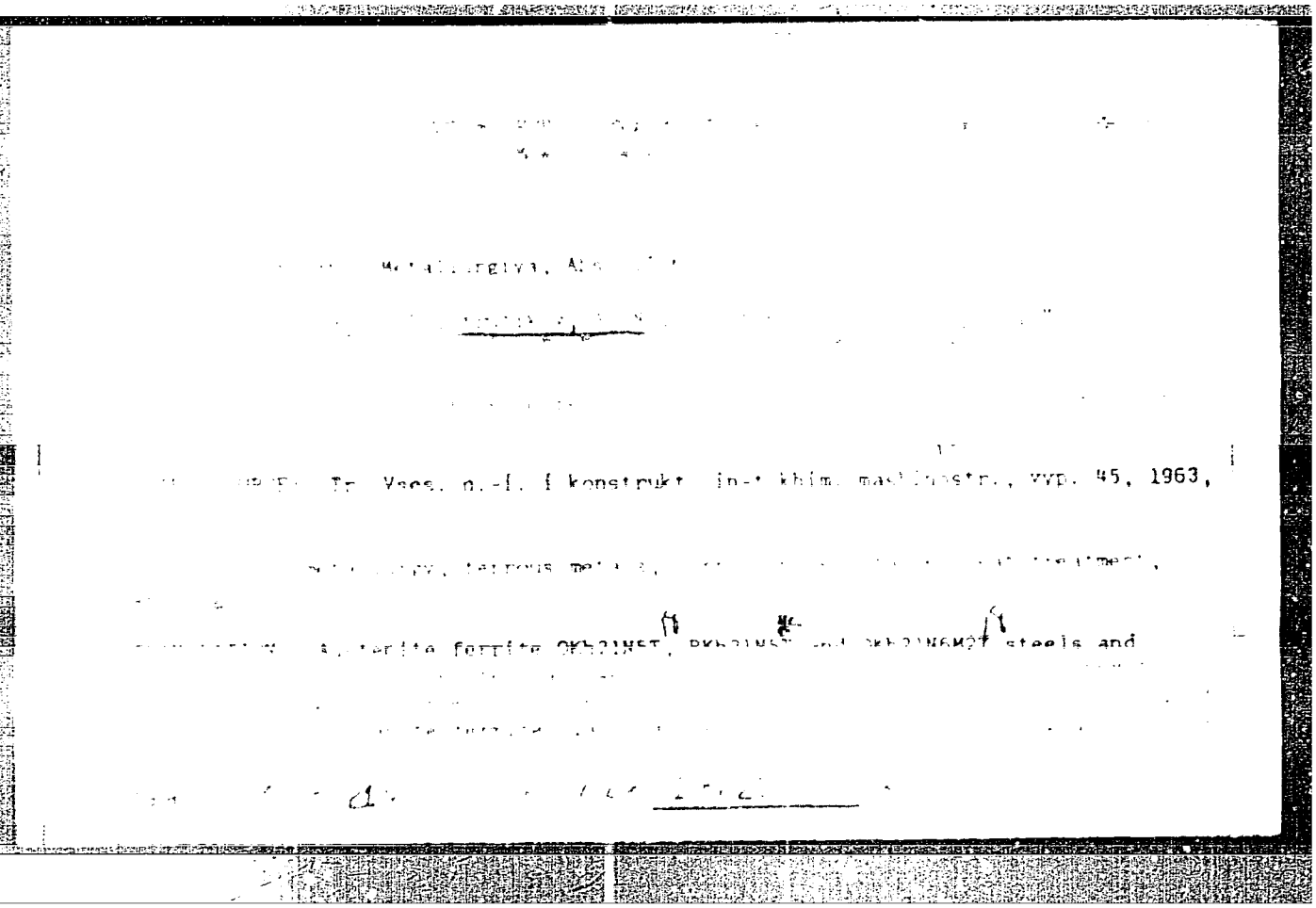
and does not cause intercrystalline corrosion in the weld metal produced with a LMI-11 (TsL-11) electrode; the ductility of the weld joint is increased. Kh17T steel and its welded joints do not show intercrystalline corrosion. Industrial tests were carried out in HNO_3, $C_2H_2O_4$, HCOOH, H_3PO_4, CH_3COOH of various concentrations. In Kh17T steel during heating from 1,000 to 1,300°C strong grain growth (up to point 1) is observed; as a result a_k drops from 9 - 11 to 0.06 kgm/cm^2. A decrease in a_k caused by high-temperature heating is irreversible; subsequent heating does not improve the steel properties.

L. Koblikova

[Abstracter's note: Complete translation]

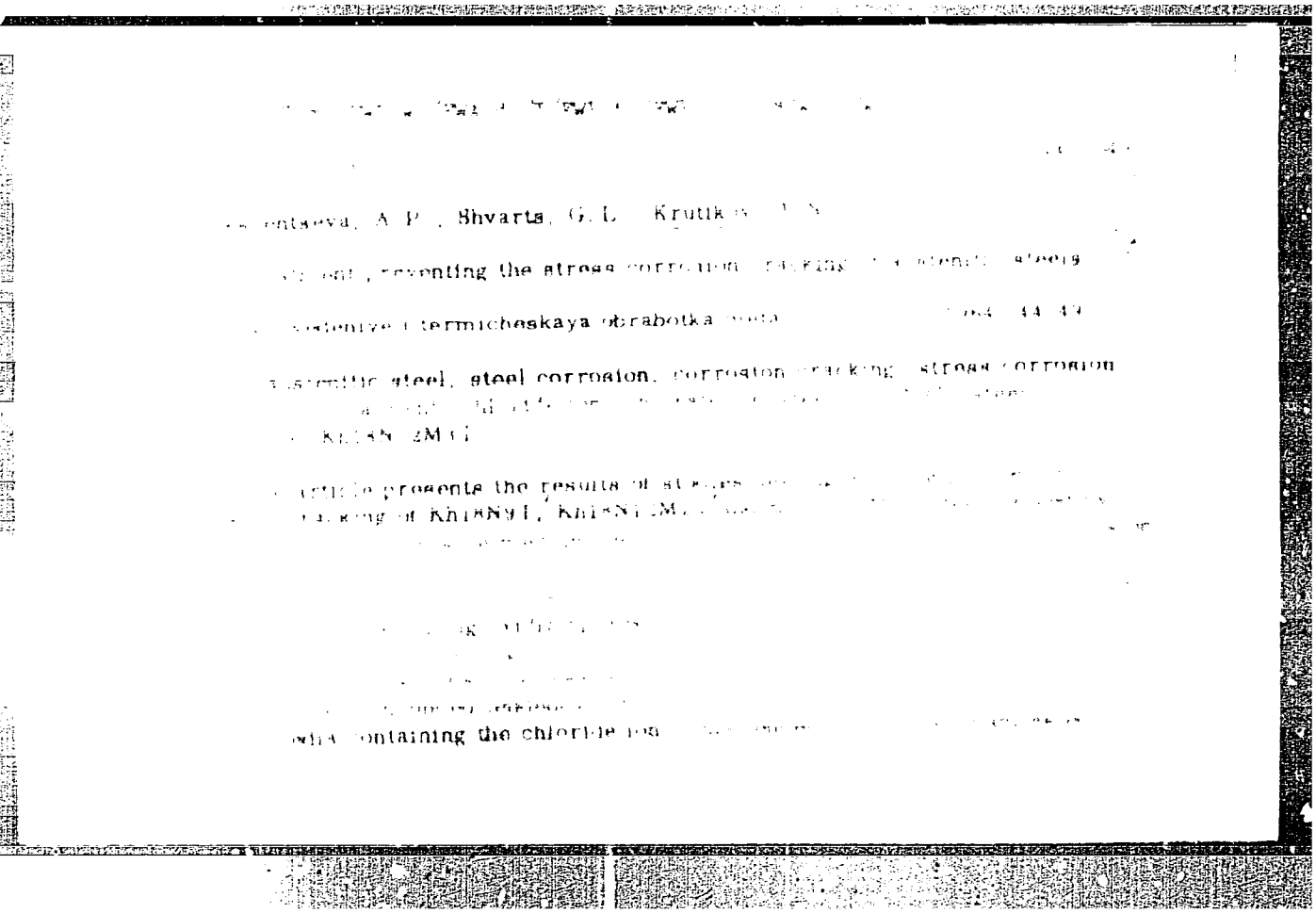


2 hours. The σ_g of OKh21N6M2T steel is increased from 45 to 51 kg/mm^2 and that of OKh21N5T steel to 50 kg/mm^2 by heat treatment, which produces martensite conversion.

quenching from 1150°. Seams welded with an austenite electrode are resistant to intercrystalline corrosion.

ISTRINA, Z.F., inzh.; VOLIKOVA, I.G., kand. tekhn. nauk; KRUTIKOV, A.N., kand. tekhn. nauk; FROLIKOVA, Ye.M. , inzh.

Corrosion resistance of metals in the production of citric acid. Khim. i neft. mashinostr. no.2:36-37 Ag '64 (MIRA 18:1).



L [illegible]-5

ACCESSION NR: AP4047510

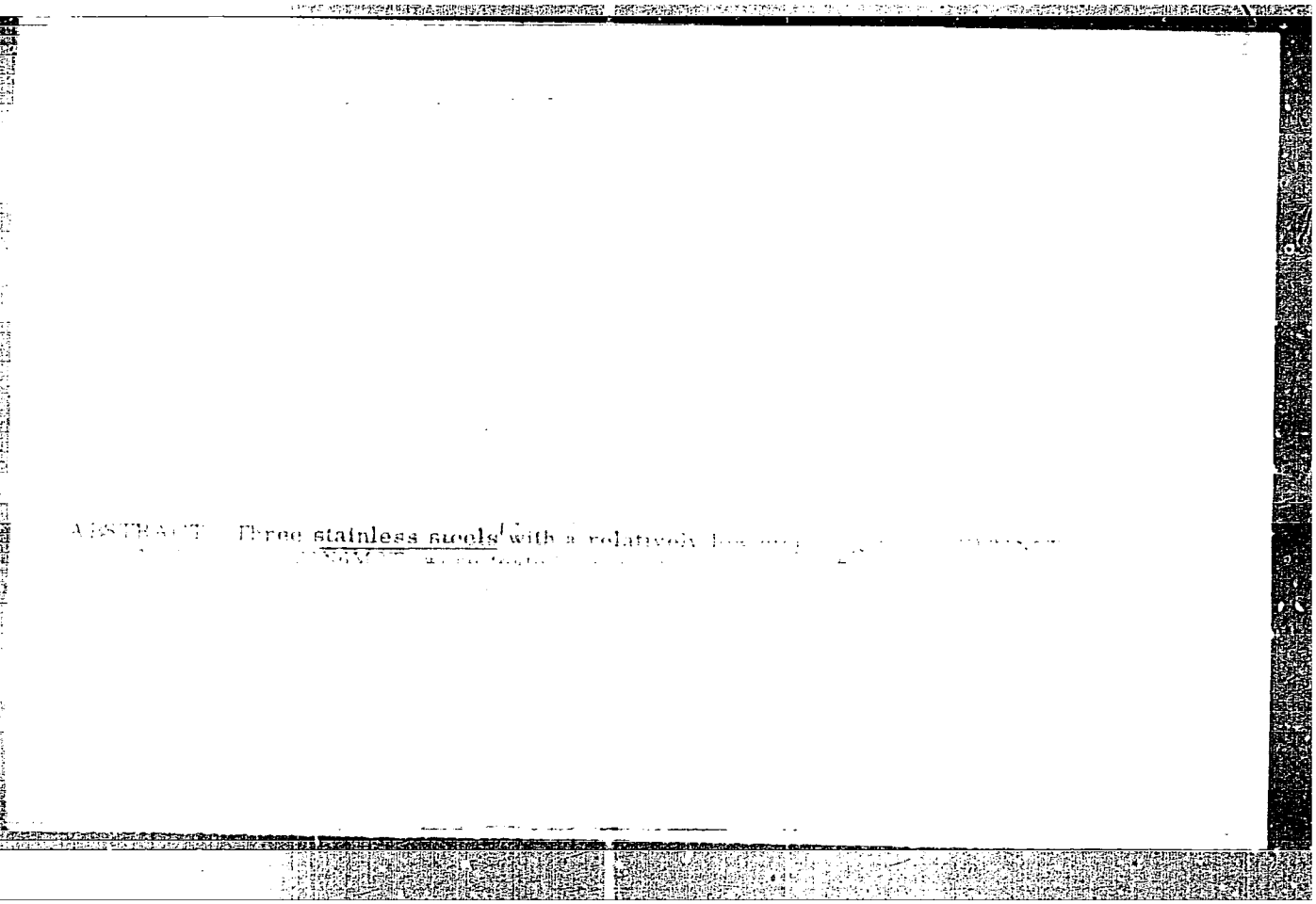
[illegible]ntrated sodium hydroxide solutions at 200C Stabilizing annealing at 900-920C [illegible] followed by cooling in air was found to prevent the cracking

[illegible] concentrated NaOH solution [illegible]

[illegible] figures and 1 table

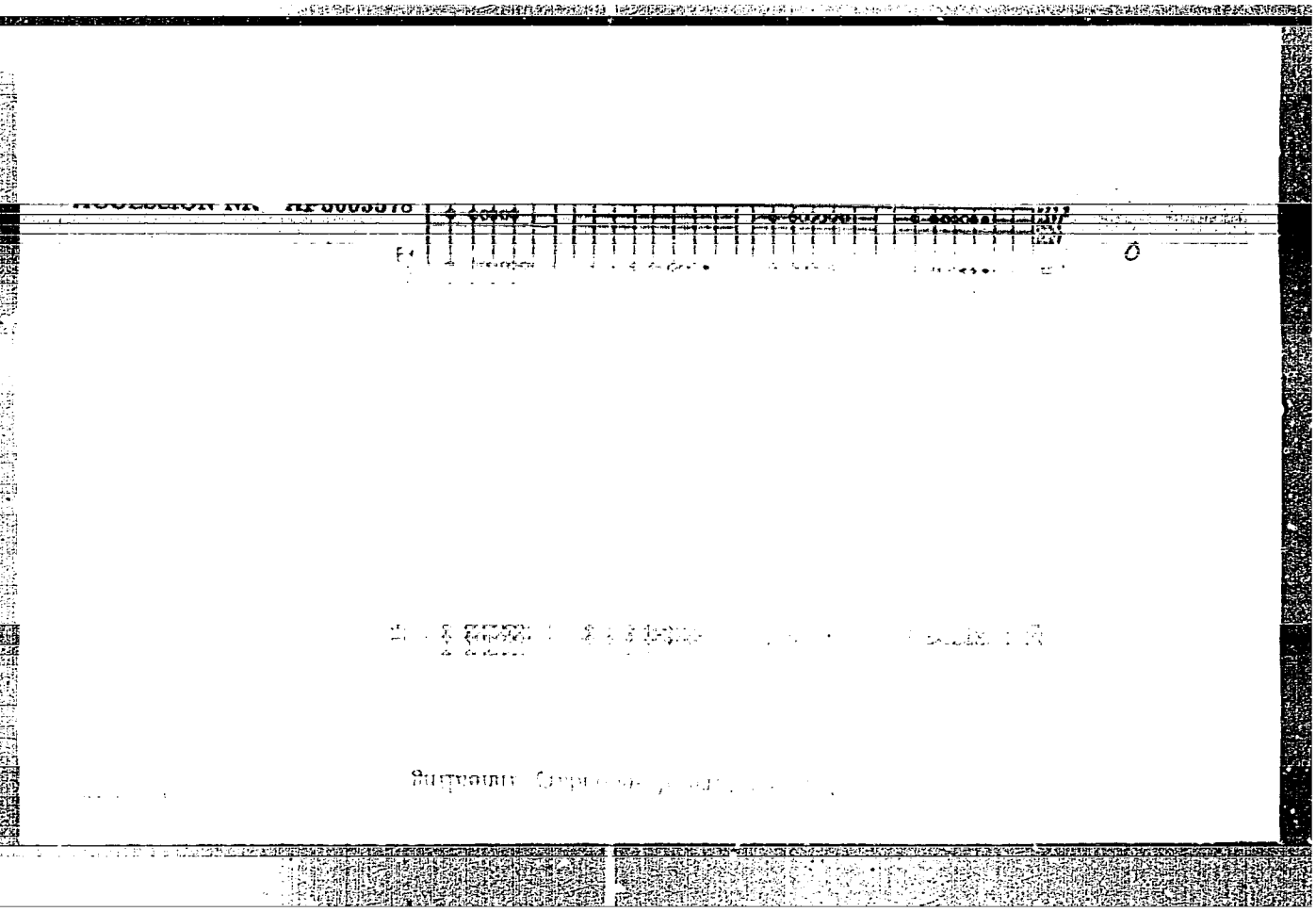
[illegible]MASh

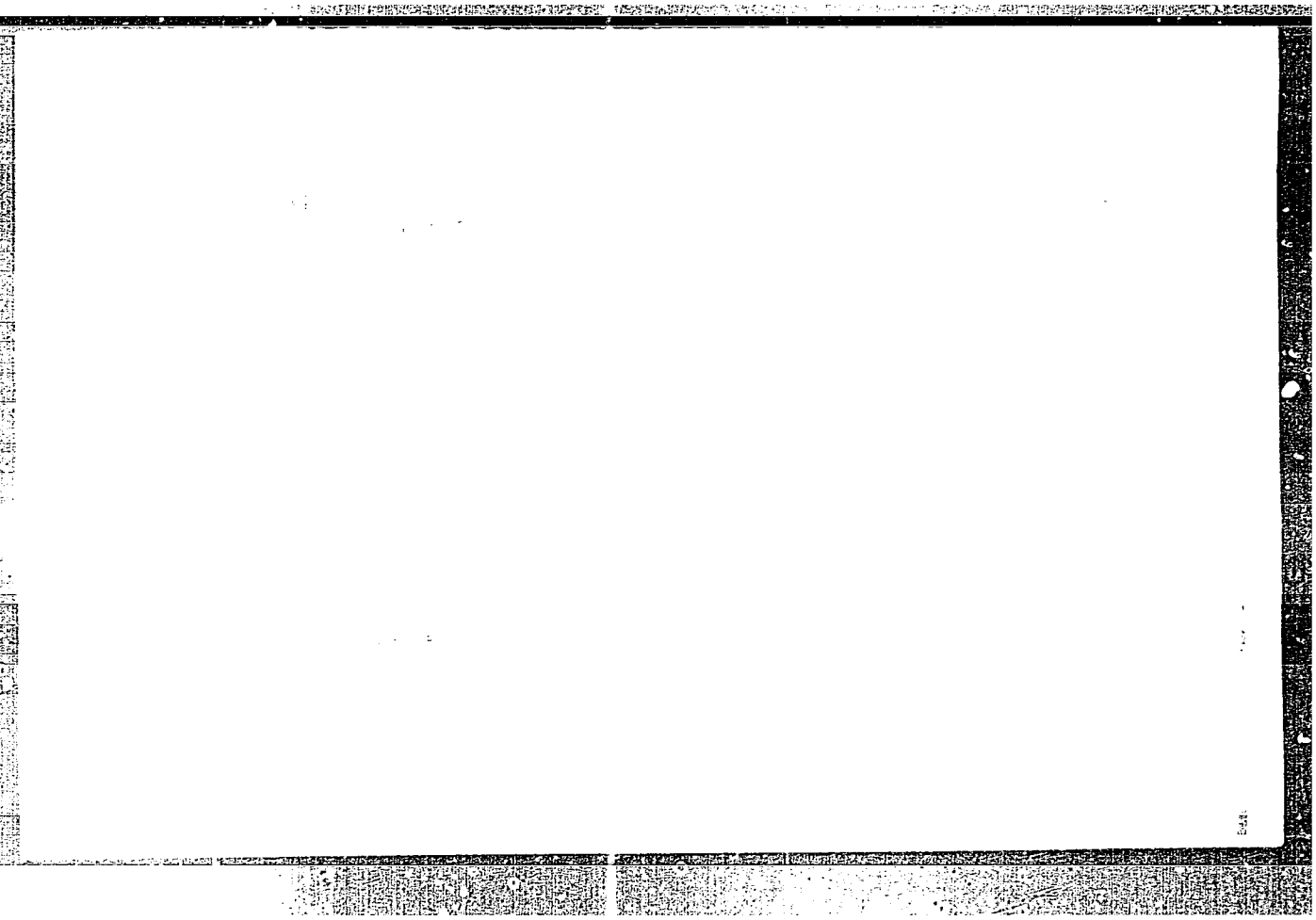
ENCL [illegible]



ABSTRACT Three stainless steels with a relatively

pended on temperature and steel type, as shown in Fig. 1 of the enclosure [illegible]
and 6 tables.





APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000826810016-9"

SOV/49-58-7-12/16

AUTHORS: Bocharov, Ye.I. and Krutikov, A.S.

TITLE: Absorption of Radiation in Liquid Water (Pogloshcheniye radiatsii v zhidkoy vode)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, pp 923 - 926 (USSR)

ABSTRACT: The absorption of radiation in liquid water has been studied by several authors (Refs 1-3) but the data obtained (Ref 4) vary considerably - the centres of the absorption bands differ by 0.1 - 0.2 μ (equal to the displacement between liquid water and water vapour bands). The absorption coefficients obtained also vary, e.g. for the band from 2.7 - 3.0 μ, Ref 5 gives α = 2 733 cm^{-1} and Ref 6 gives α = 7 330 cm^{-1}. The present work was undertaken to try and obtain greater accuracy.
An infra-red (Perkin and Elmer) spectrometer was used with a thermo-element as radiation receiver and a potentiometer recorder. It was calibrated against a mercury arc. A water cell could be placed in front of the spectrometer with insertions giving a thickness (to 2-5% accuracy) of 0.025, 0.051, 0.100, 0.152, 0.203, 0.254, 0.304 and 0.406 mm. Distilled water was used.

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In the wavelength region 1.44 and 1.96 μ, a LiF prism was employed - Figures 1 and 2 show the absorption bands for liquid water in this region (wavelength in microns against absorption coefficient in cm^{-1}). Table 1 gives values for the absorption coefficient at various wavelengths as obtained for a spacer of thickness 0.100 mm in various experiments. Variations in thickness and parallelism of the cell sides increases the error by 1.5-2.0%. Values obtained are compared in Table 2 with those of other authors. The centres of the absorption bands are found from the measurements to lie at $\lambda_1 = 1.44 \pm 0.02$ μ; $\lambda_2 = 1.96 \pm 0.02$ μ. The absorption coefficients, α, in the centre of the absorption bands are found to be: $\alpha_1 = 29.5\ cm^{-1}$ and $\alpha_2 = 130.6\ cm^{-1}$ with an error < 2%. Measurements of the band at $\lambda = 2.94$ μ are very difficult owing to the very small thicknesses of water required. The method used was to compress a water drop between two sheets of glass: the thickness of the drop

being determined from the area covered and its weight (the error in these measurements varied from 8-38%). A NaCl prism was used. The absorption band for $\lambda = 2.94\ \mu$, for various thicknesses of water, is given in Figures 3 and 4 (wavelength in microns against emergent intensity in arbitrary units) 0-0 denotes the zero lines. The thicknesses of the water layers were 0.4, 0.8, 1.40, 2.25 and 25 μ. The average value for the absorption coefficient obtained was 6 700 cm^{-1} with an error $< 40\%$; the centre of the band was at $\lambda = 2.94 \pm 0.03\ \mu$.
A LiF prism was used for measurements at $\lambda = 4.7\ \mu$ with water thicknesses of 0.025 and 0.051 mm. Figure 5 shows the absorption band in this region - the absorption coefficient at the centre is 472 cm^{-1} and the band centre lies at $\lambda = 4.72 \pm 0.04\ \mu$.
A water cell of variable thickness was constructed as depicted in Figure 6. A cylinder 2 rotates on a threaded sleeve 3 in which a window 10 is fastened by a retainer 6. The liquid is poured in through 8. The cylinder 4 is connected with 3 by means of 7. Thus, they rotate together and the window remains stationary, relative to them.

The accuracy is increased by the fact that the sleeves have different threads, e.g. 0.7 and 0.75 mm, so that one rotation advances the window by 50 μ. The error in measuring the thickness of the liquid layer is about 1-2 μ, so that for a layer 0.1 mm thick, the error does not exceed 1.5%.
There are 6 figures, 2 tables and 7 references, 4 of which are Soviet and 3 English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki (Ac.Sc.USSR Institute of Applied Geophysics)

SUBMITTED: June 22, 1957

1. Radiation--Absorption 2. Water--Absorptive properties
3. Infrared spectrophotometers--Applications

KRUTIKOV, B.S.

Concurrent separate exploitation with flow production of two layers in a single well. Trudy VNII no.22:154-183 '59. (MIRA 15:4)
(Oil fields--Production methods)

KRUTIKOV, B.S.; PERTSOV, A.Yu.; PUSTOVOYT, S.P.

Developing and testing equipment for separate water injection into two beds through one injection into two beds through one injection well on the Romashkino oil field. Neftaprom. delo no.7: 19-23 '64. (MIRA 17:8)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut i neftepromyslovoye upravleniye "Leninogorskneft'".